

TWIN CITY LINES

Summer 2008

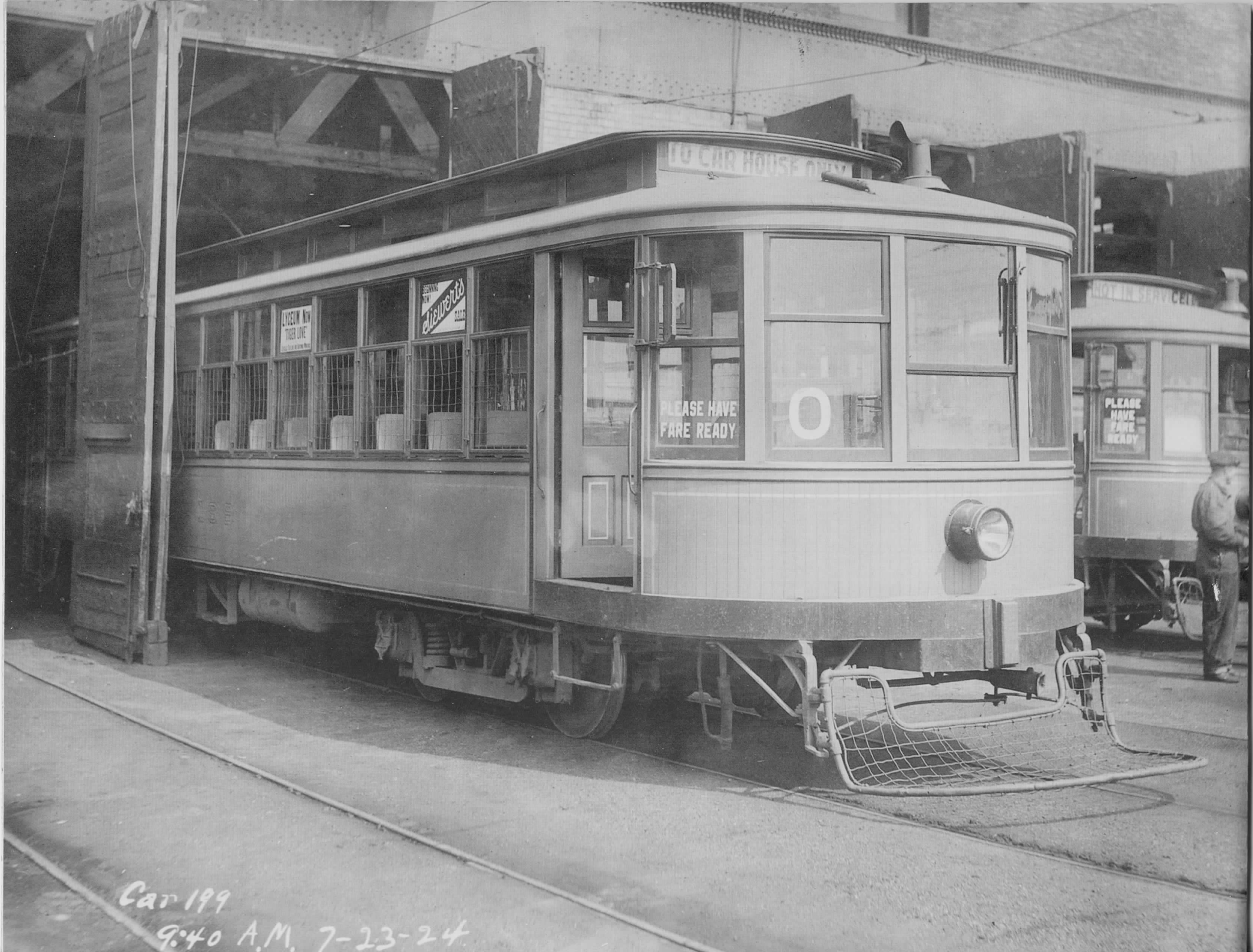


1908

2008

TCRT 1300

100 YEARS OF SERVICE



Car 199

9:40 A.M. 7-23-24

TWIN CITY LINES

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The Minnesota Streetcar Museum operates the Como-Harriet Streetcar Line in Minneapolis and the Excelsior Streetcar Line in Excelsior. Its mission is to preserve Minnesota's electric railway heritage.

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CORRECTIONS AND NEW INFO

Bob Johnson noticed that the 6:03 photo on page 11 is mis-captioned. "This car is going north (not south) from 54th street after it had wyeed. Ellen's Swedish Bakery was on the east side of Chicago Ave. The time should be 6:15. This is where I caught the cars when they were still running."

Barney Olsen writes:

"That bus on the cover (of the Spring 2008 TCL) is pretty significant. It is a Yellow Coach (GM) Super Coach developed jointly with Greyhound. It pioneered transverse rear engine mounting, and raised passenger deck seating so that luggage could be stowed below. This is either a Model 719 introduced in 1936 or a 743 introduced in 1937. The 743 was almost identical but incorporated a number of improvements. Greyhound bought 329 Model 719s and a whopping 1256 743s.

I have been studying the lower photo on page 7. I have concluded that the only way that streetcar can turn onto the curved tracks in the foreground is with some car jacks and rerailling frogs! It looks like the track the car is on eventually leads to 8th."

Barney is correct. The diverging track in the photo is actually the wye at North 7th Street and 3rd Avenue North, the downtown terminus of Anoka interurban cars next to the joint Dan Patch/Luce Line depot. The switch for Chicago-Penn-Fremont car to reach 8th Street was a block further south.

Russ Olson writes: "The Page-21 upper photograph caption is misleading. The line was built in 1894 to the Park with a loop at the park as an extension of the Maria Ave. Line. 1896 and 1900 street guides list the Maria Ave. line as operating from 7th & Wabasha to Indian Mounds Park. Second track was added in 1906 from "Hastings Ave. to Mound St." So this track was used in regular service. The Sightseeing cars must be on the loop track at the Park. The line was cut back in 1909 from the Park to Burns Ave. I haven't found the reason why but lack of sufficient ridership may be one."

MSM NEWS SUMMARY

See Streetcar Currents for the full story
(www.trolleyride.org)

Classic Car event a success

On June 1, MSM hosted its first annual Classic Cars and Streetcars event. Over 80 antique and classic autos were displayed along Queen Avenue and 42nd Street, as streetcars passed. They carried over 750 passengers, considerably more than a typical day. The event was a great success, and will be repeated next year.

Little things add up

This space in the magazine is reserved for museum news that would be of interest to non-members (government officials, journalists and others) who receive the magazine. This seemed like a good time to list the numerous small but essential accomplishments that may not stand

out by themselves but add up to a well-run organization.

-the Linden Hills depot garden has been weeded and annual flowers planted.

-the depot interior has been painted and the retail display area refurbished and expanded.

-streetcars 1300 and 265 may be in their best shape ever. Their brake valves have been redone. 265 received new brake shoes. The trolley pole bases were recently removed and lubricated for the first time in many years.

-new t-shirts are being sold for the 1300 centennial, and used books are for sale in the depot for the first time, along with several other new merchandise items.

-the installation of rail bonds, essential for the efficient use of electricity, was completed at Lake Harriet.

-Online sales of surplus items began last year and provide a modest, but steady revenue source.

-The museum website can now accept credit cards for the first time

-In the last year, over a thousand new photos have been added to the MSM archive.

-the restoration of Winona streetcar #10 continues, with preparation underway to fabricate a new underframe to replace the deteriorated original.

-new history displays have been created for the Excelsior car barn.

-the largest new group of streetcar operators in several years is going through training.

Front cover: This issue celebrates the 100th birthday of a remarkable survivor, streetcar #1300. In 1953, it was one of the last to serve the Minnesota State Fair, where it waits to load passengers. John Runk photo, Minnesota Historical Society collection.

Inside front cover: Our streetcar 1300 was part of the 24-member I-1 class, manufactured at Snelling Shops during March-May 1908. Five of those cars were built for Duluth, including car 199, shown at the Duluth carhouse in 1924, still in its as-built gate car configuration. For some reason, Duluth's fenders were different than TCRT's. Duluth also kept the as-built gold striping well into the 1920s. TCRT gave it up about 1918. Duluth also differed in employing large route designation numbers and letters. "0" stands for 26th Avenue W. and Superior Street, the sign for a car barn pullin. North East Minnesota Historical Society collection.

STREETCAR 1300

100 years and counting

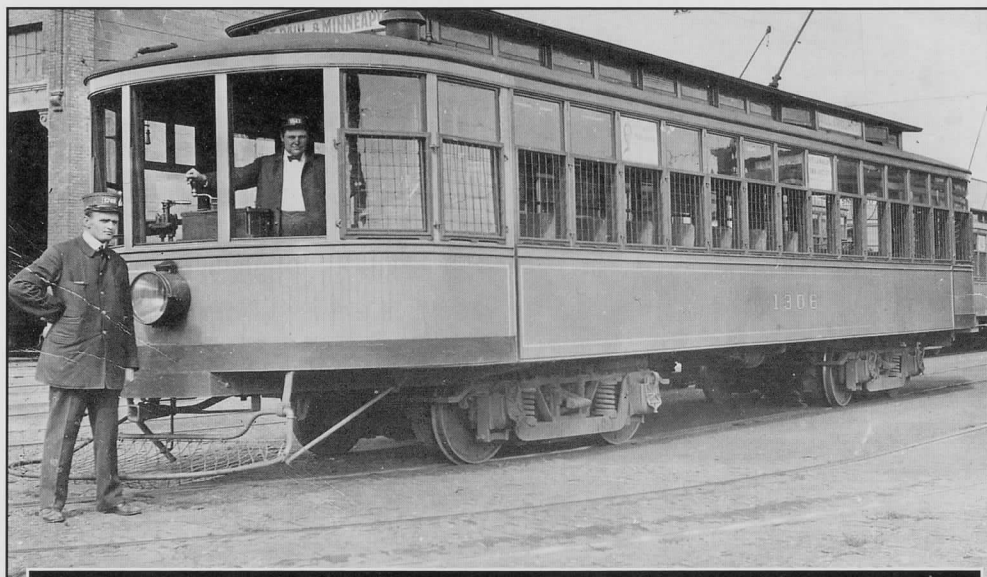
This issue of Twin City Lines celebrates the 100th birthday of the streetcar that started our museum. Car 1300 is one of 1268 wooden standard cars designed and built in the shops of Twin City Rapid Transit Company during the period 1898-1917. During its 46-year regular service career, 1300 was rebuilt twice, changing its exterior appearance and interior appointments. During those years, it traveled almost 2 million miles and transported many millions of passengers. Against all the odds, it survived. Today it teaches new generations what it was like to ride a streetcar in the Twin Cities.

1300 AND THE I-1 CLASS

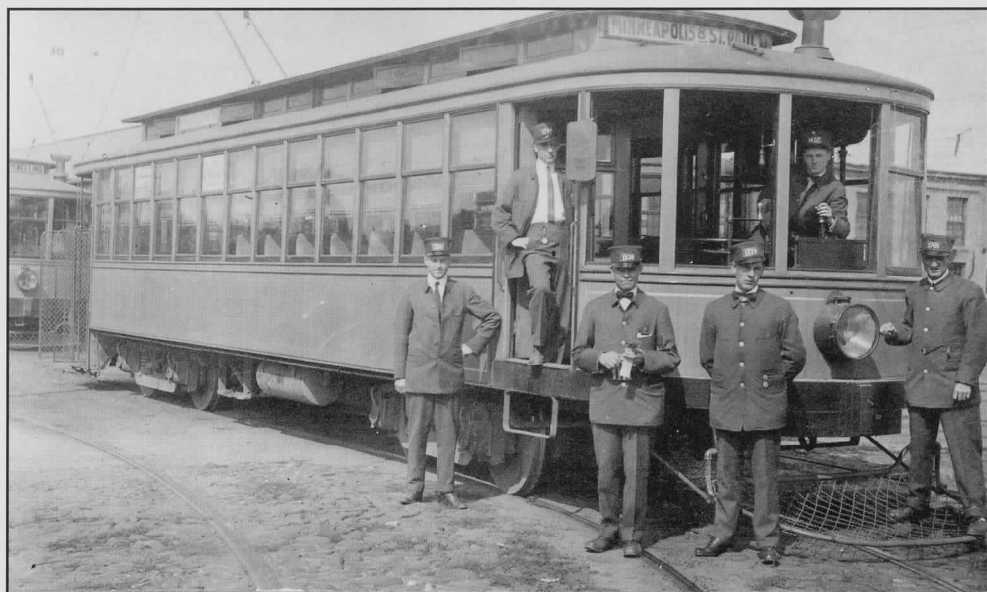
-Russell Olson and Aaron Isaacs

Number 1300 is the only survivor of a class of 24 cars designated I-1, built in the Snelling Shops in St. Paul during March-May 1908. Of this group, 19 were for TCRT (numbers 1291-1309) and five were for Duluth (numbers 198-203). The two orders went thru the Snelling Shops together. 1300 was completed April 9th. DSR 202 was completed April 10th. Let's follow them through their careers.

Length	46' 7 1/8"
Width	9' 2 1/2"
Height	11' 5"
Baldwin #5 trucks (6'0" wheelbase)	
Four G.E. 213 motors (50 hp each)	
Gear ratio 15:71	
K-37-A controller	
G.E. CP-21 air compressor	
One 10" brake cylinder	
G.E. R.B. trolley base	
7" trolley wheel	
Peter Smith hot water heater	
Arc headlight	
Weight 47,800 pounds	



1300 and its sisters looked like this when new and assigned to equally new Snelling Station. Note the gate car configuration, Baldwin trucks, arc headlight and white gold pin striping. The wire mesh screens were hung on the pole side of the car to prevent passenger arm injuries. In the winter they were replaced with storm windows.



How much did it cost to build No. 1300?

Carbody, wire and mount	\$2,539.68
4 Gen. Elec. 213 motors,	
K-37 controller	\$2,447.50
Freight on motor and controls	\$65.00
2 TCRT No. 5 trucks	\$469.04
Gen. Elec. CP-21 air brakes	\$241.00
Freight on air brakes	\$6.00
Total	\$5768.22

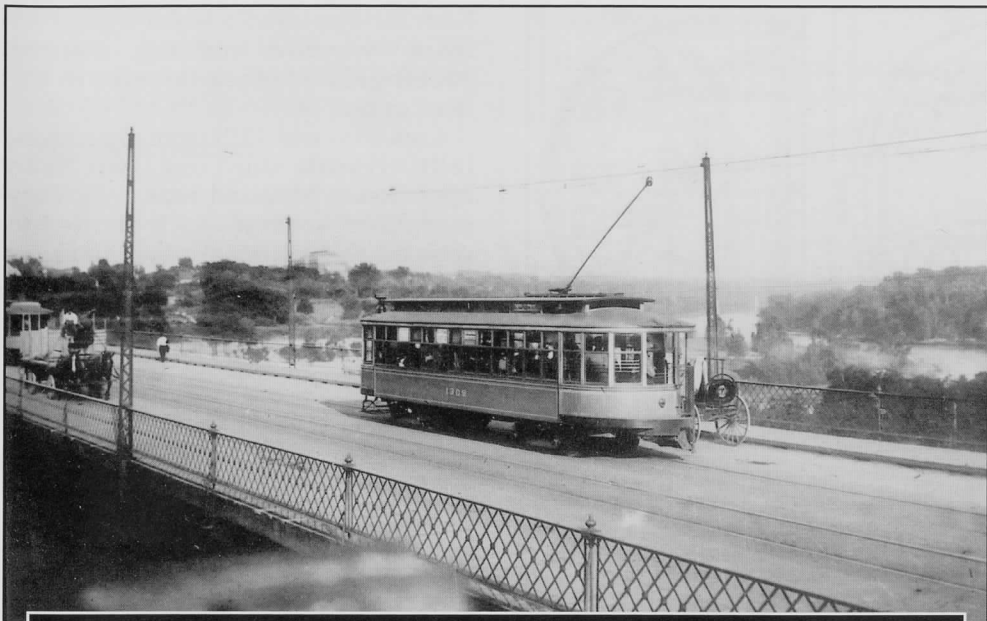
TCRT 1291-1309

The I-1 class was designed to be faster to cut the running time on the "Interurban" line (St. Paul-Minneapolis). This was the first group of cars to have 34" steel wheels. No. 1300 was completed April 9, 1908, and assigned to Snelling Station, St. Paul.

At Snelling Station 1300 was assigned to the "Interurban" (St. Paul-Minneapolis) line for many years. On April 21, 1920 it was one of eight cars transferred to Lake St. Station, Minneapolis. But on August 2, 1921 it was transferred back to Snelling Station. During August 1921 TCRT decided to put newly rebuilt front-exit cars on all the inter-city lines, which required extensive transfers of cars among the various car stations. On September 1, 1921, cars 1289-1330 were transferred to Duluth Ave. Station. These 44 cars were then equipped with front marker brackets for "St. Paul Wildwood" service on the Stillwater Division.

As originally built, TCRT streetcars required that all passengers board and alight through the rear platform gates. This created congestion at the rear of the car and slowed service. The solution was to add a front exit door, creating a one-way flow within the car from back to front. During 1920-1924 526 cars (1329-1854) were rebuilt with front-exit doors.

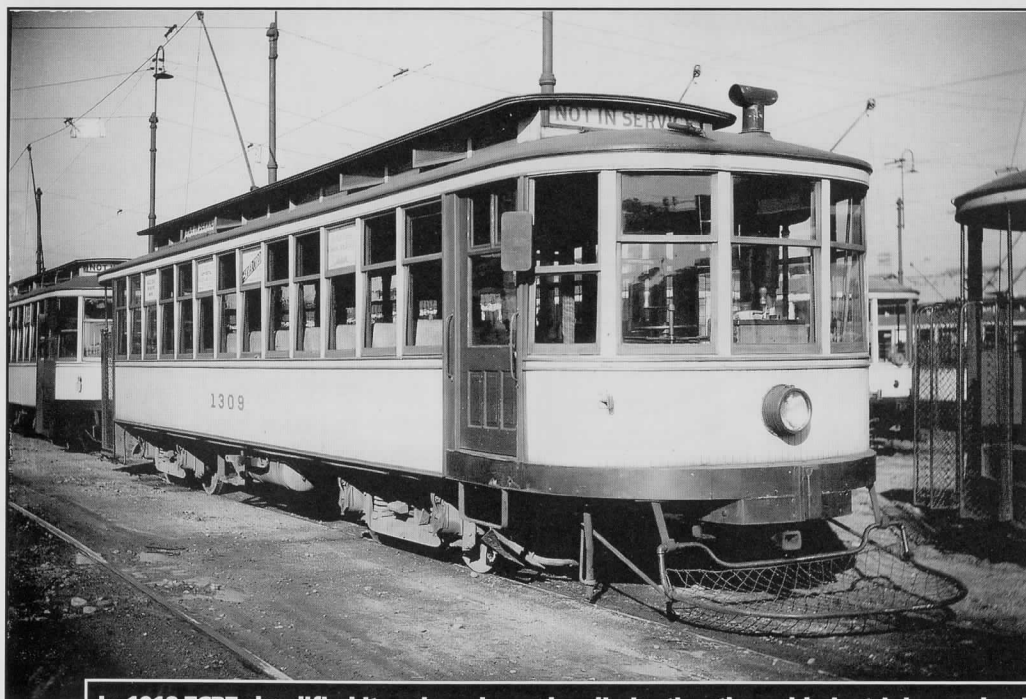
During 1928 all of the older wood-framed cars (except for double end cars) thru #936 were placed in storage.



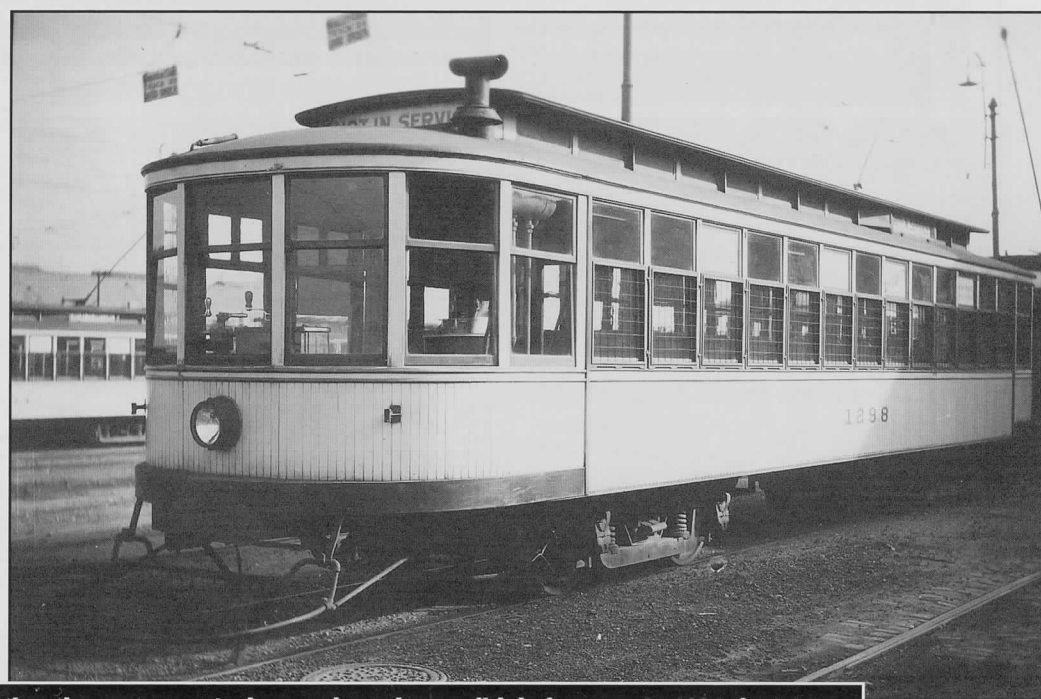
How old is 1300? Old enough that most of the other vehicles sharing the street were horse-drawn. This is sister 1309 on the Washington Avenue bridge over the Mississippi River near the University of Minnesota.



In 1928, the I-1 class were reequipped with TCRT #9 roller bearing trucks and front exit doors. We don't have a photo of an I-1 in this configuration, but H-6 class #1274 received the same treatment that same year and the differences between the two classes are minimal. Cars 1291 and 1292 kept this configuration until scrapped in 1952.



In 1918 TCRT simplified its color scheme by eliminating the gold pinstriping and painting the motorman's door and numbers solid dark green. In 1921 the I-1 cars were transferred to Duluth Station and assigned to the Stillwater line Wildwood pool. For this role they received marker brackets, as shown in these photos.



The 25 lightweight cars completed in December 1927-January 1928 apparently were assigned to lines that formerly used the shorter 870-895 series cars. To replace the older standard cars, 64 cars, 1254, 1266-1328, were rebuilt with front-exit doors July thru December 1928. Cars 1254, 1266-1309 had steps with double rear gates which were replaced by steps with triple rear gates in the rebuilding process. Before the rebuilding, cars 1254, 1266-1290 were "slow" cars (40 h.p. motors). As all 64 cars were to be "fast" cars, extensive equipment changes were undertaken. New Twin City #9RB (roller bearing) trucks were manufactured. The G.E. 203G motors were transferred from 1578-1599, 1626-1667 (which received G.E. 216 motors from other cars). All 64 cars were converted to electrical heat.

As a result of all this rebuilding, 1300 and its sisters were reclassified as Class I-8-f-203.

Here are the details:

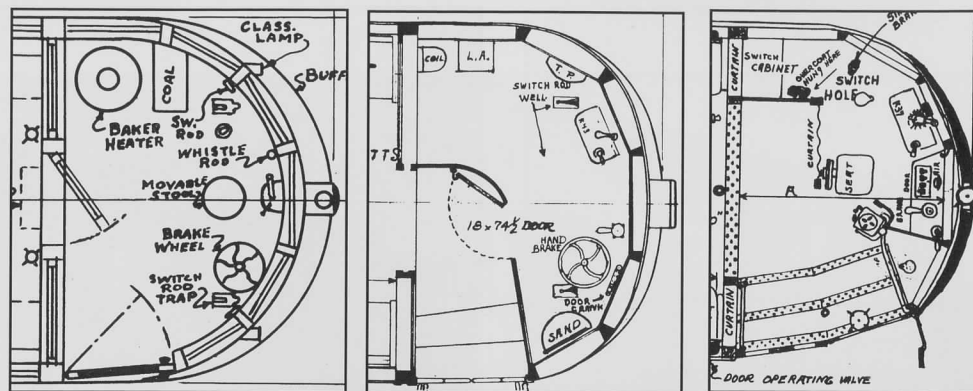
Length 46' 0"
Width 9' 2 1/2"
Height 11' 5"

Twin City #9RB trucks built new with roller bearings
Four G.E. 203G motors (50 h.p. each)
Gear ratio 16:68
K-43-F2 controller
All electric heat
Weight 46,140 pounds

Upon completion on 12/31/1928, 1300 was assigned to East Side Station.

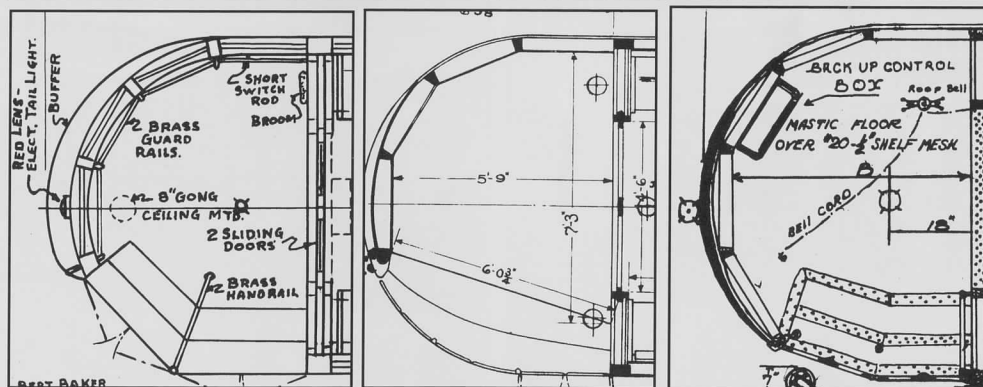
Ridership declined through the 1920s and the decline accelerated with the onset of the Great Depression in 1929. TCRT had to cut costs and the lowest hanging fruit was the elimination of the second person on the car, the conductor. However, the design of all of TCRT's streetcars required a conductor. All passengers entered through the rear gates, where their fares were collected.

The motorman opened and closed



Front platforms: Above Left: As built, the motorman was isolated behind the front bulkhead, which had a single hinged door. There was also a hinged exterior door. Middle: In 1928 a single stream passenger front exit door was added, the bulkhead door was removed and the bulkhead separating the motorman's compartment was shifted forward. The coal-fired heater was replaced by electric resistance heaters. Right: After the 1-2 man rebuild in 1931, most of the front bulkhead was eliminated, and double-stream air operated doors were installed, along with a farebox.

Rear platforms: Below left: As built, passengers entered the rear platform through 2-stream rear gates, then through the sliding rear bulkhead doors to the passenger compartment. Center: In 1928 the double-stream gates were changed to triple-stream to increase boarding speed. Right: In 1931 double stream air-operated rear doors replaced the gates. The rear bulkhead doors were removed.



the rear gates, but only when signaled to do so by the conductor.

To run a streetcar with only the motorman required shifting passenger entry and the farebox to the front platform and installing double-stream air operated doors at both front and rear. Enclosing the rear platform, and eliminating the motorman's isolation from passengers made the sliding rear

bulkhead doors and front platform partition unnecessary. They were removed, reducing weight and a maintenance item.

The rebuilt cars could be operated by either a one- or two-man crew. This created some confusion, because passengers boarded through the front door on a one-man car and through the back door if there was a conductor.

Each car displayed a wood sign in the front window telling waiting passengers whether to enter in the front or rear.

Cars 1854 and 1328 were experimentally rebuilt for one/two man operation in May and June 1931. They performed so well TCRT decided to rebuild additional cars. During October-November 1931, cars 1293-1327 were so rebuilt (1291 and 1292 remained gate cars). The gear ratio was changed from 16:68 to 18:66 so that these heavier cars with G.E. 203 motors would have the characteristics of lighter cars with the same motors. Car 1300, now Class N, was completed 11/24/1931 and was one of ten cars assigned to Lake Street Station in Minneapolis.

Number 1300 was one of three cars transferred to Snelling Station February 7, 1934, and later in 1934 to East Side Station. At East Side Station 1300 was used on the Como-Harriet and Oak-Harriet lines from 1934 through 1953. Field shunts for higher top speed were installed during 1934. In the spring of 1935 special tests were made on increasing braking ratios because of the increase in speed after installation of the field shunts. Numbers 1293 and 1300 were equipped with one 12" brake cylinder, compared with one 10" brake cylinder on the similar cars. With larger brake cylinders 2.4 seconds was cut from stopping time when speed was 19.2 m.p.h.

At East Side Station posts that supported the roof were set between certain tracks. These posts prevented anyone from getting at the cars on some tracks to fire up the hot-air heaters beneath the cars. In earlier winters, the narrower old standard cars could use these tracks and one could squeeze through from one car into the next, walk through the cars, and fire the hot-water heaters in the cabs. Now all these old cars were gone from regular service. On October 17, 1936, it

was ordered that all electric-heat standard gate cars (1254, 1266-1292) and one/two man cars (1293-1328) be assigned to East Side Station.

Component changes

Down through the years, TCRT continually modified the cars to improve performance. 1300 and its sisters received these changes along with the rest of the fleet.

Backup controls

Rear-end controls for backing up were installed on all one/two man cars during 1936-1937.

Bumpers and Skirts

They were among the first with skirts around the front exit steps and the rear gate steps. Skirts were installed on all the older front-exit gate cars during 1929-1931.



Cars 1294, 1302, 1304 and 1307 were sheathed in sheet metal, which sloped to meet the top of the bumpers. 1301, turning west onto Como Avenue at Eustis Street, retained its wood sheathing. Metal sheathed 1294 stands on 1st Avenue NE, in front of East Side Station. Robert Selle photo.



We're all familiar with 1300's motorman compartment. This view, taken before the end of TCRT service in 1954, contains three additional items. Note the coin changer. Behind it, clipped to the windshield wiper air line, is the motorman's hand-written run time card. To the right of it is a pocket watch in a leather case, the better to stay on time.



Motorman John Gagnon backs #1298 into East Side Station on June 15, 1954. Note the spare trolley pole on the roof. Edwin Nelson photo.



Rear bumper "anti-climbers" (the slanted trim piece) were presumably installed on new cars 1291 and up from 1908 onward. (Although 1291 itself is recorded without it.) Front bumper "anti-climbers" were presumably first tried on the 64 cars rebuilt in 1928. This would add to the streamlined appearance (as did the metal skirts). But not all those 64 cars got front "anti-climbers" at that time.

Scrapers and Sanders

The very earliest Twin City electric cars had manually-operated scrapers for each rail attached to the front truck. Air-operated scrapers were first installed on the 64 front-exit cars rebuilt in 1928. They were afterwards installed on all one-man cars. All scrapers were removed and sold for scrap during 1950.



In the last years before abandonment, 1301-1304 were Inter-Campus regulars. This sequence shows a trip on 1302 from the St. Paul Campus to the Minneapolis campus.

Gate car sanders were located in the front cab, worked by a knee-operated lever, and sanded the right rail only. One-man cars had air-operated sanders for both rails, controlled by a foot pedal, with the sand in boxes beneath the front longitudinal seats.

Electric Heat

The 64 cars rebuilt to front exit in 1928 were given electric heating to replace the hot water heater in the cab. The resistors were enclosed beneath the car (forward) and their heat piped along the right side, with electric strip heaters beneath all the seats on the left side. The first one-man car, 1854, was also so equipped in 1931.

In December 1931 the resistors under 1327 were moved to a center location, and their heat piped along both sides of the car. 16 Chromolax strip heaters and wiring were removed and retired. Auxiliary strip heaters with thermostatic control were installed on the platforms. (This car later differed from other cars in the group.)

In 1931 automatic thermostatic control equipment was bought and installed for the electric heaters of 100 cars (which included 1254, 1266-1328). These thermostats were disconnected in the late 1930's and removed in 1942.

Electric heat cars rebuilt to one-man operation, 1293-1328, had three switches to control the heaters. #1 was for the main heaters under the seats, possibly also for one heater beside the rear door. #2 was for 10 heaters: 3 rear defrosters, 1 pole side rear bulkhead, 1 farebox pole, 1 by front door, 1 by front switch rod, 1 on front farebox stand, 1 by motorman's foot, and 1 on pole side partition forward of the switch box. The small switch, #4, was for 4 front defrosters only.

Front Vestibule Windows, Window Wipers

During 1904-1905 all cars were equipped with an outside rear view



Front end evolution-note how the windows changed over the years from the original gate car (above), to the front exit gate car (above right) to the one-two man car below. Even later came the air-operated windshield wipers.



mirror. In 1907 motormen, who had been required to stand at all times while operating, were permitted to sit down while on the outlying segments of their routes. The mirrors had to be lowered so larger upper sash were required in the so-called "mirror window". These new mirror windows were probably first built in new car 1291 in 1908, but thereafter were also installed in the older cars. These were still drop sash.

The next change was made in 1928 when window wipers were first installed. These were hand-operated "Chinch" wipers. They were installed with what was termed a "one-piece" front window, a fixed two panel window; the lower panel being 10" high and the upper 28". Mirrors were again lowered and the fixed mirror window installed; made of two glass panels corresponding in height to the front window. All 590 of the front-exit gate cars were so equipped during 1928-1929.

The next change was made during 1930-1931 with the installation of a sliding sash for ventilation in the small lower pane of the mirror window. All 590 front-exit gate cars were so equipped.

In cars rebuilt for one-man operation, this mirror window was displaced by the wide front doors, and at first the new mirror window consisted only of the original drop sash. New three-part fixed mirror windows, with the center pane an inclined sash, were placed on the last 24 cars of the 100 cars rebuilt for one-man operation during 1932. Thereafter this slant sash was installed on all later cars rebuilt, plus 151 cars rebuilt earlier, including 1293-1328.

Tests of air-operated window wipers were conducted in July and August of 1941. They were installed in six cars, one car for each car station, in October and November of 1942. On February 2, 1944, work was authorized to remove Chinch wipers and install Air Push wipers on 702 regular passenger cars and 18 snow plows.

Interior Lighting

As of January 1911, carbon arc lamps were used for interior lighting. The first installation of 16 tantalum lamps was made in new car 1388. Older cars were then so equipped.

The 64 cars rebuilt during 1928 received the front-exit gate car lighting arrangement. There were four series. Two series of five lights each along each side of the car, one light on each second window post from the front. One series of two lights illuminating each side destination sign, and one light above the front step. And one series of two lights illuminating the front destination sign, one light above the fare box and two lights on the rear platform. Gate cars had 94-watt headlights and 8-watt tail lights.

Early in 1932 new lighting arrangements were made in

1327. This car was given nine 56-watt in the car body and a 56-watt headlight. Cars rebuilt for one-man operation during 1932 were made to conform to this pattern. In 1934 the earlier rebuilt one-man cars (1293-1326, 1328, 1854) were also changed starting from the old 23-watt gate car system. Holophane shade reflectors and shade holders were put on all bulbs in these cars.

The standard one-man car lighting was changed again; Authorization #7204 dated 11/3/1937, completed 1/5/1940, removed the 56-watt headlight and one "Entrance" [sic] box light. 56-watt lights were retained inside the car, arranged in two series of four lights each (alternate lights in opposite series); these two series connected with a re-installed 94-watt headlight (which dimmed if either series went out). A new circuit of five 15-watt lights was installed, one for the farebox, one for the tail light, and three in the "Enter Here" sign. At this time all light shades were removed from the cars.

Headlights

There is very little information on early headlights. Ed Nelson found one report that around 1910 enough cars were being fitted with carbon arc headlights for night run cars on all lines to have them. The earliest data sheets for 1291-1309 (1915) indicate TCRT-manufactured Twin City Luminous Arc Headlights on these cars.

When cars were rebuilt with front exits beginning in 1920, headlights were changed to the incandescent type. The first Golden Glow headlights (Electric Service Supplies Co.) were installed during December 1920. TCRT manufactured Twin City Incandescent Headlights. Other manufacturers of incandescent headlights were Dayton Manufacturing Co., Mazda, and Crouse-Hinds Company.

Tail Lights

In the early years red lanterns were hung on the rear of the cars at night. In June 1911 electric tail lights, operated from storage batteries were installed on all standard cars. These were used for many years.

Authorization #7201 dated 10/18/1937, work completed 10/20/1938, covered removal of the tail-light storage batteries and holders plus the installation of reflecting tail-light lenses on 722 cars. The tail lights were then incorporated into the lighting circuits.

We haven't found any information on the reflectors that were mounted above the tail-light and below the trolley retriever, other than a tail-light reflector was tested on 1439 at Snelling Station 12/29/1935.

Deck Roof Ventilators

Deck Roof windows were counted from the front of the car.

Brass handle ventilators: gate side windows 2-4-9-12; pole side windows 2-9-12.

Shop order of early 1929: install four automatic ventilators to draw moist air from car and prevent front windows from getting frosted. Retire "4 brass transom turns".

Rebuilt one-man cars 1166-1506:

Gate side: 2-12 automatic, 4-9 brass handle;

Pole side: 2-12 automatic, 9 brass handle.

Trolley Retrievers

Retrievers were being installed on cars during 1914, if not earlier; some 1200's and 1300's getting them then. August 9, 1916, shop order: all cars when at the shops were to be equipped with a snap at the end of trolley rope, and eye on a post at rear of gates. Rope to be run thru eye and attached to snap, allowing rope to hang in loop from eye.

Photographs indicate this was a secondary trolley rope, in addition to the rope attached to the retriever. We have not found an explanation for this. Knutson Trolley Retrievers No. 2 and No. 5, were the types used.

Trolley Wheels

Kalamazoo 4" diameter trolley wheels were used on cars built thru number 1429. These wheels were manufactured by Star Brass Works. TCRT then began manufacturing 7" diameter trolley wheels for cars from number 1430 upward. Cars 1112-1429 were refitted with the 7" wheels.

Hot Water Heaters

Baker Heaters had been used on cars built thru 1290. Beginning with car 1291 the change was made to Peter Smith Heaters. TCRT-built heaters (Twin City) were installed on cars from 1686 upward, except for those which were electrically heated.

Frost Shields in Window

These were first used in 1937. On one-man operated cars they were placed on three front windows, plus a small one above the back-up control. In the fall of 1948 they were also added to the window left of the controller window (after years and years of telling motormen to look to the left before they started up).

Sun Visors and Curtains

These were installed during 1944 on all regular cars, at the same time Air Push window wipers were installed. The visors were attached to a rod at the pole side of the front window.

Curtains to shield against the sun were installed in the spring of 1947. One curtain the size of the small upper mirror window sash was hung on hooks at the top of the mirror window or controller window.

Emergency Rear-Door Openers

"Break Glass, Pull Chain" were installed around 1942.

"STOP 10 FEET BACK" was lettered on the rear dash by the rear doors during 1937.

Motorman's Footrest

This was a post-World War II response to long-standing complaints by motormen that they needed a third hand to operate the controller and air brake while making change and cranking coins through the farebox. The footrest allowed them to hold the brake handle over with the right knee.

Painting and Sheathing

Shop records indicate 1300 was repainted 10/19/1934 (recoat) and 1/13/1939 (sides coated). Following the company's policy of rehabbing its cars every five years, 1300 was rehabilitated and repainted 5/18/1936, 7-22/1940, 9/18/1945, and 3/6/1950.

Beginning in 1939, TCRT began sheathing some standard cars with sheet metal instead of replacing rotted wood wainscoting. Cars 1294, 1302, 1304 and 1307 received the sheet metal, while other cars in the class remained wood.

Final years

1301-1304 became the regular cars on the Inter Campus line in the summer of 1953. Car 1300 was added about February 15, 1954, 1300-1304 were the regular Inter Campus cars until the end of operation June 18, 1954.

Disposition

Gate cars 1291 and 1292 were burned in 1952. 1293-1309 lasted to the end of service in 1954. Nine of them active on the very last day.

Duluth 198-203

The I-1 class sisters to 1300 (cars 198-203) were built for Duluth. This order



Car 201 as delivered in 1908. It's unclear why the area around the number appears lighter. Note the early version of the fender.



A rear view of 202, rebuilt for 1-2 man operation



In 1930 #198-203 were extensively rebuilt for one-man operation. Besides air-operated front and rear doors, the front end windows were reconfigured, and they received new trucks, motors and controllers. Interestingly, some retained the gold outlined numbers and lettering. This is October 12, 1931.

went thru TCRT's Snelling Shops concurrently with TCRT 1291-1309. On the TCRT order the first car was completed 3/10/1908 and the last car 5/28/1908. On the DSR order the first car was completed 3-10-1908 and the last car 5/10/1908.

These were DSR's first "fast" cars (50 h.p. motors). We don't know why they were ordered or what line or lines they were intended for. All were assigned to the Duluth Division. No new lines or extensions had been completed during this time period. We can speculate that

it was due to increasing passenger traffic requiring more cars; DSR would accept whatever TCRT was building at the time.

As of February 1930 198-202 were assigned to the Superior Division. As of October 1932 all (198-203) were assigned to the Duluth Division.

Apparently DSR operating management was somewhat independent of TCRT management, which was primarily involved with corporate and financial management. Herbert Warren, located in Duluth, was the officer responsible for operations and maintenance. No doubt Duluth and Superior city councils and ordinances affected operations as well.

The two cities made decisions that caused their respective fleets to differ in appearance more and more over the years.

DSR did not adopt the TCRT car classification system. According to photographs and data sheets DSR customized their cars as follows.

- * 5" diameter trolley wheels.

- * Imperial Junior arc headlights (manufactured by Crouse-Hinds

Company). These were later replaced by Golden Glow headlights, which TCRT used.

- * Electric marker lights, using changeable colored lenses, were located on the right-hand front dash. They were used to identify the routes of the cars, but were replaced in January, 1920, by the roll-sign box mounted on the front platform right-hand upper window.

- * Pivot-bolt stirrup step at motorman's cab door and skirt attached to the rear step. These two modifications were made in 1913 to minimize damage and reduce repair costs from automobile collisions.

- * "Lifeguard" system using the TCRT standard fender. DSR subsequently redesigned the fender.

- * The TCRT seating arrangement was retained but capacity was rated at 46 persons instead of TCRT's 48 persons. During 1920-1921 the "pole side" (left side) rear bench was cut back one space from the rear bulkhead, reducing the seating capacity to 45 persons.



The Duluth system transitioned from streetcar to buses and trolley buses during 1934-39. The Lester Park line to the east end of Duluth via Superior Street was converted to trolley bus in 1934, and the double wires are visible. Car 202 has just descended 1936-built track on East 2nd Street between Superior and 2nd Avenue. Built to retain streetcar service through the retail heart of downtown. It featured the steepest adhesion grade on any Minnesota street railway, 10.65 percent. North East Minnesota Historical Society collection.

TCRT eliminated the white gold pin-striping about 1918, but it persisted on part of the Duluth fleet into the mid-20s. Even after it was gone, some Duluth cars retained the gold-outlined exterior lettering, while some switched to the solid dark green TCRT style.

Like TCRT, Duluth sought to improve passenger circulation by adding a front exit to some of its gate cars. However, unlike TCRT, which added the doors to a large portion of its fleet, DSR added them to only eight cars in the period 1924-26. None

of the I-1s received front exit doors. Passenger loads were probably not as heavy in Duluth, making the front exits unnecessary on most lines.

In 1928, DSR began converting two-man cars to one-man operation by enclosing the rear platform and adding air operated doors. At the same time, the front end was reconfigured, creating the asymmetrical look that #265 has today. The Duluth rebuildings were very different in appearance from TCRT's. The front doors were double width and the rear door was single width, actuated

by treadles in the stair treads.

198-203 were rebuilt for one-man operation during March thru May 1930. The first car was completed 3/20/1930 and the last car 5/6/1930. 202 (1300's "sister") was completed 4/12/1930. The rear platform was enclosed and a double set of narrow folding doors and steps, 36" wide opening, treadle operated, replaced the gates. A double set of pneumatically-operated doors with steps with an overall opening 53 1/2" wide were installed on the front platform.

Interior lights were moved from the

window posts to the ceiling with glass lampshades. Ceilings were painted with white enamel. Eight rows of double cross seats were located in the central portion of the car, with longitudinal benches on both sides at the front and rear.

A curved bench seat was installed on the rear platform, just like on car 265. Seating capacity increased to 51 or 52 persons. Rear end controls were installed for backing-up operations. Controllers and brake valves were equipped with General Electric safety equipment. All six cars retained their original electrical and mechanical equipment and had a high braking ratio. Unlike TCRT, which equipped its I-1s with electric heat and moved its coal heaters off the front platform, Duluth kept the front platform heaters.

After November 1936 cars 198-200 received Twin City #9 trucks with G.E. 200 motors (retained the K-37-A controller).

198-201 were retired April 1939, 202 in July 1939, and 203 in June 1939. The carbodies were subsequently sold during May, June and July 1939.

THE LAST STREETCAR RIDE

-Fred Rhodes

(Reprinted from the May/June 1984 Minnegazette)

When the last regularly-scheduled streetcar ever to operate in the Twin Cities pulled into East Side (Mpls.) Station at 1:34 a.m. on June 19, 1954, it brought to an end an era that will never be seen here again. However, before the electricity was shut off, the overhead wires cut down and the tracks paved over, the Minnesota Railfans Association made one last railfan trip over all remaining electrified trackage later that same day.

Clark Johnson, president of the MRA, arranged the 2-car all-day trip directly with Fred Ossanna, enemy of



Pulling out of East Side Station

railfans everywhere but also president of Twin City Rapid Transit Co. Wood-sided streetcar 1300 and steel-sided car 1775 were selected as the vehicles to shine the tracks for the last time.

The grand tour started and finished at East Side Station and ran from 10 a.m. until 5 p.m. The fare was a nominal \$2 (\$1 for children) which included a box lunch at Lake Harriet Station.

TROLLEY AU REVOIR
Traversing
ALL REMAINING STREET CAR LINES OPERATED BY
Minneapolis Street Railway Co.
St. Paul City Railway Co.

Sponsored by Minnesota Railfans' Assn.

Saturday June 19, 1954 From East Mpls. Sta. Leave 10 A.M. Return 5 P.M.

OAK HARRIET COMO HARRIET-BROOKSIDE
UNIVERSITY INTERCAMPUS

2 cars used - 1300 1775

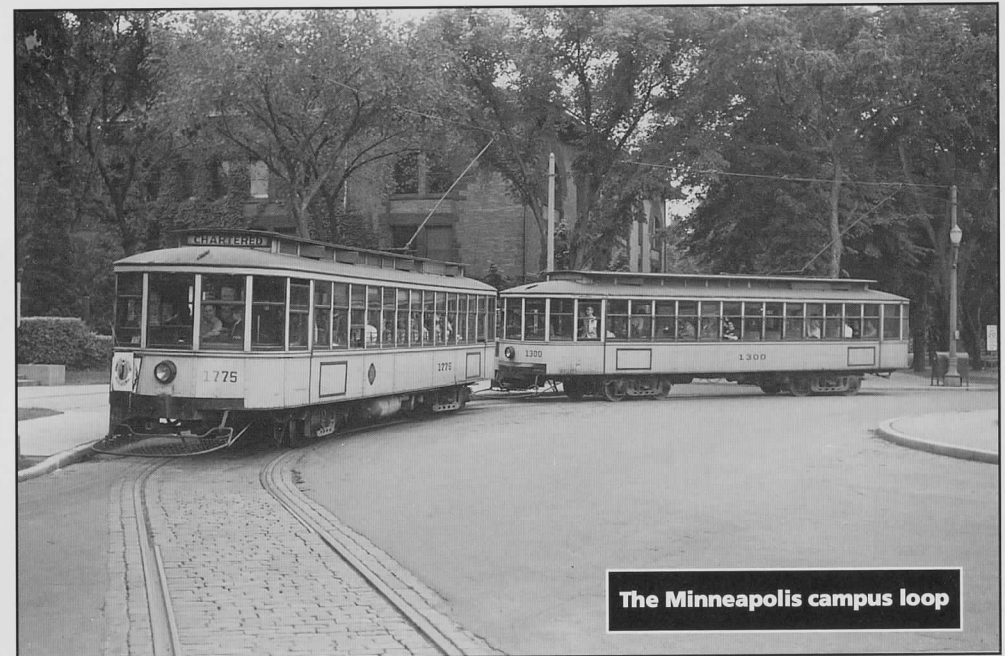
FIRST AVENUE NORTH
ACCESS LINE to SNELLING SHOPS, ST. PAUL
Via WASHINGTON & UNIVERSITY AVES.

Last regular passenger run at Lake Harriet Station, June 18th

Lake Harriet Lunch Stop

Adults - \$ 2.00
Children - \$ 1.00

The Last Trip ticket



The Minneapolis campus loop



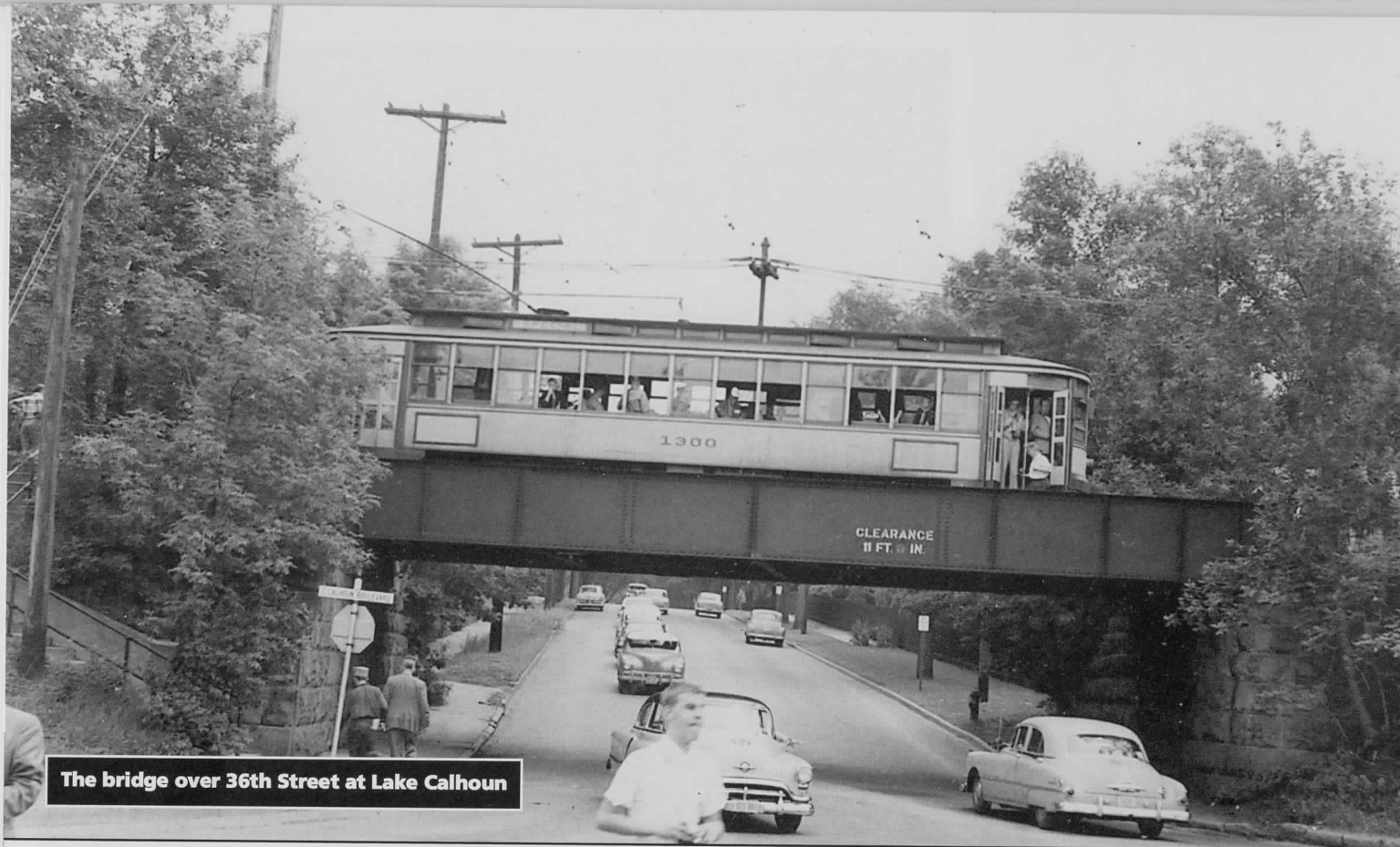
The St. Paul Campus loop

The trip included runs over the just abandoned Como-Harriet, Oak-Harriet and Inter Campus Special streetcar lines and runs on Washington and University Aves., streets kept electrified for shop trips to Snelling Shops in St. Paul.

The cars made numerous photo stops; in front of East Side Station, on the 36th St. bridge, under the Washington Av. viaduct, at Lake Harriet Station, on the Brookside loop, on both loops of the Inter Campus Special line, under the foot



At the Oak and Beacon wye, east end of the Oak-Harriet line



The bridge over 36th Street at Lake Calhoun



Outbound at the Lake Harriet Station

bridges that cross over Washington A v. at the U ofM and at Snelling Shops.

When the cars entered Snelling Shops and meandered around over seldom-used trackage filled with dirt, car 1775's rear truck derailed. Everybody got off both cars to watch the rerail process.

The rerailing didn't go smoothly so many members went on a scavenger hunt in the yards and began stripping destination signs, bells, etc. off of the streetcars standing in long lines waiting to be scrapped. Too bad they didn't rip off a couple of complete streetcars.

Jim Bertrand and another young member came across wire car No. 72, placed the trolley wheel on the wire, fired up the air compressor and took off on their own joyride around the yards. Fellow member and TCRT employee Bill Olsen spotted the renegade rail car, stopped it and gave the teenagers a scolding. After 1775 got off the ground, the tour left Snelling Shops much to the relief of TCRT.

Nobody recalls the box lunch at Lake Harriet Station as being anything to write home about but it did seem strange to let the two cars sit on the mainline for an hour without worry of blocking streetcar traffic. Stranger still was riding around all day and not passing another streetcar.

After several photo stops along the Lake Harriet right-of-way, the cars made a second and final run over the line, this time a no-stop high-speed trip.

At 5 p.m., the group was returned to East Side Station. The trip was over. Everything was all over. Nobody knew then if a streetcar would ever run in the Twin Cities again. Even though the MRA had suggested then that the Lake Harriet right-of-way be left intact along with one car, nobody was sure that it would actually happen. There were no plans as yet for a museum streetcar line.



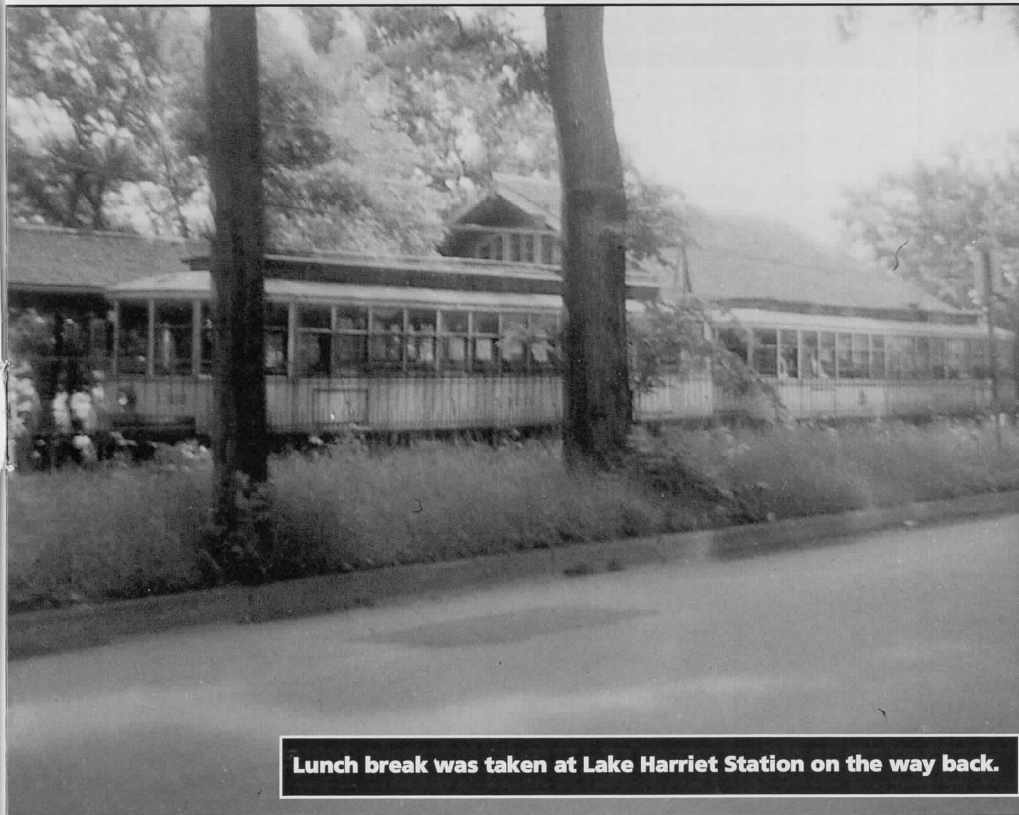
During the layover at the Brookside loop in Edina, a Minneapolis, Northfield & Southern freight passed.

As it turned out, it was nine years until a streetcar did run again—in 1963 when car 1300 carried passengers in the yards of the Minnesota Transfer

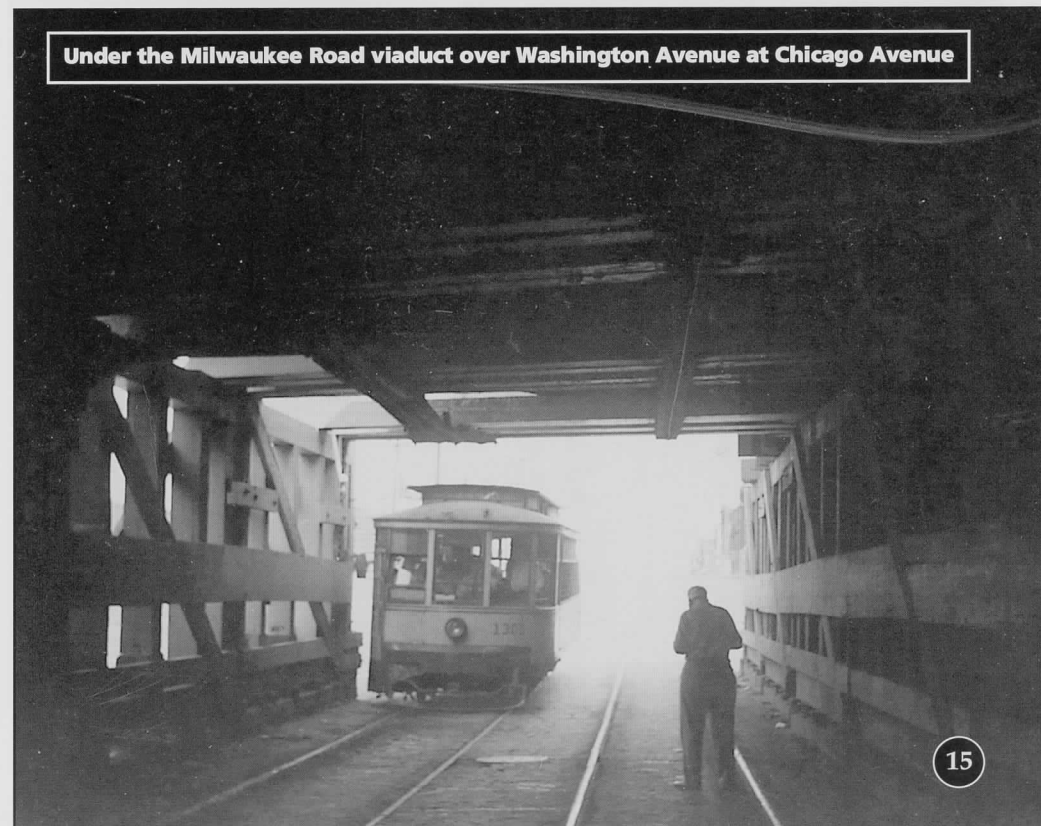
Railway in St. Paul. Then it was eight more years until car 1300 ran again, this time permanently on the restored Lake Harriet right-of-way—in 1971.



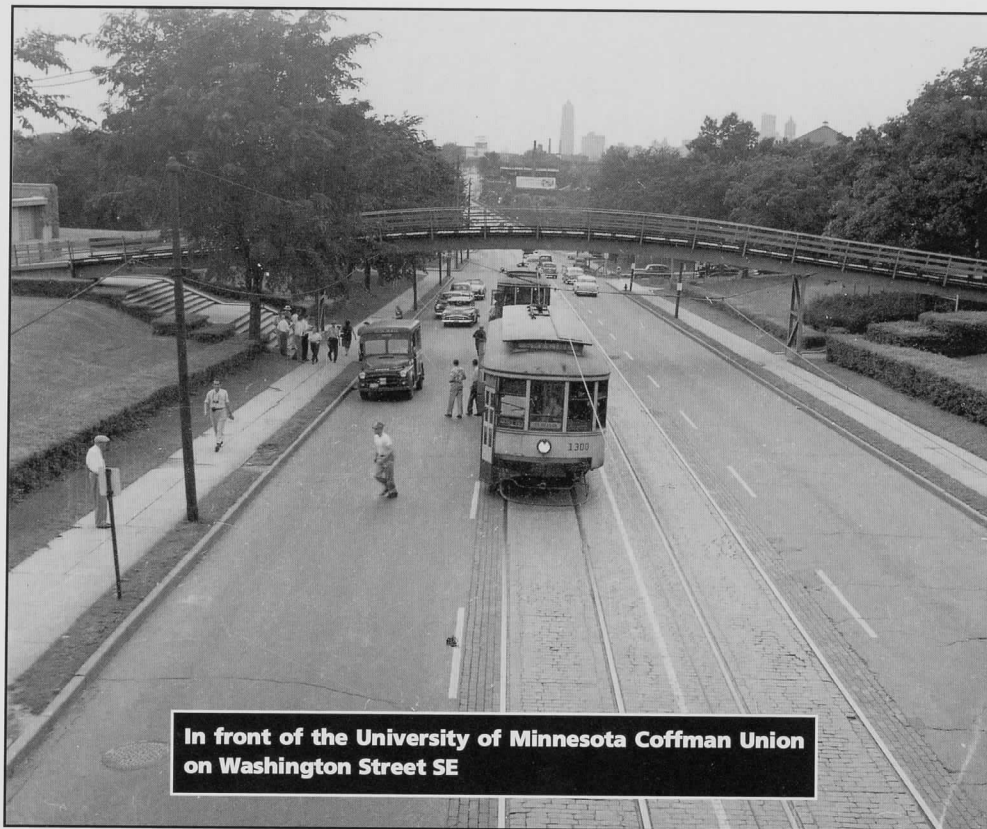
Bill Olsen at Lake Harriet station with the widow of Charles Sulzbach. Sulzbach was very active in the Minnesota Railfans Association until he was killed in the Milwaukee Speedrail fan trip collision in 1950.



Lunch break was taken at Lake Harriet Station on the way back.



Under the Milwaukee Road viaduct over Washington Avenue at Chicago Avenue



In front of the University of Minnesota Coffman Union on Washington Street SE



Here's something you can't do today. After being donated to the Minnesota Railfans Association, 1300 was moved by rail to its temporary resting place in Hopkins. They ran the air brake line through the car.

SAVING 1300

-Clark Johnson

Contemporaneously with the end of trolley service Bob Schumacher and I had visited the TCRT office at 1 So 11th Street to not only arrange the "final" trips, but to see if we could snag a TCRT-built streetcar for posterity. I remember well visiting Mr. Ossana's office. It was on the second floor and had a big, heavy door. Access was permitted by a big, burly guard who closed the door after we had entered. We were now in what was a sealed room with Ossana.

Ossana didn't have a problem donating a car; he offered the 1300 and we took it. Immediately after the odious June termination date, he planned on burning every remaining car at Snelling and told us to get the 1300 out of there.

It was moved next door to one of the Montgomery Ward spur tracks.

We finally located a siding in Hopkins at the Minneapolis-Moline plant there on which to store the 1300. On September 17, 1954, the Milwaukee Road came over with a 600 hp diesel locomotive and a bar that mated to the streetcar at one end and the pin holding the locomotive's knuckle.

So on a sunny Saturday morning the Milwaukee switcher slowly went from Midway, out the 29th Street line, by West High (where I had gone and seen many trains whiz by including the Olympian Hiawatha), along Lake Calhoun and out past St. Louis Park and Hopkins to the Moline plant.



At Snelling Shops



At South Minneapolis yard on the way to Hopkins



From 1954 to 1962, 1300 sat on this siding at the west end of the Minneapolis-Moline plant. There was no fence and no tarp, yet it was never vandalized.

1300 REBORN

Donated to the Minnesota Railfans Association by TCRT in 1954, 1300 had sat out in the open at the Hopkins Minneapolis-Moline plant since then and deterioration was setting in. Amazingly, it was never vandalized.

In 1962 the plant closed. MRA was given only a couple of weeks to move 1300. MRA formed the Minnesota Transportation Museum Committee to take action.

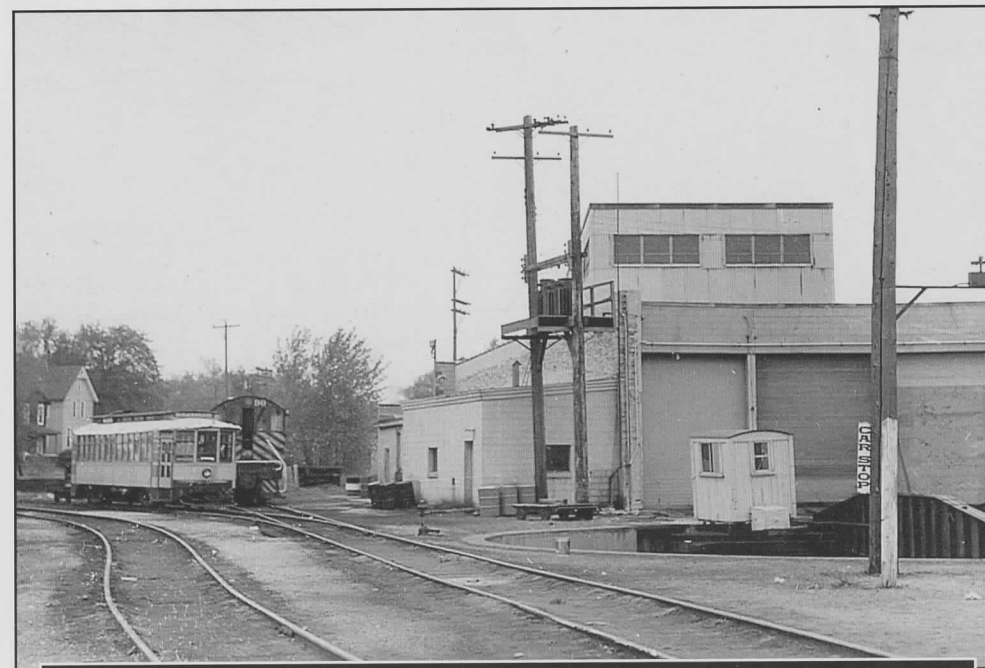
Before there could be restoration, there had to be a restoration site. Using contacts at the Great Northern, MTMC made a deal to move the car into a vacant stall in the Minnesota Transfer Railway's roundhouse on Cleveland Avenue in St. Paul. Longtime member Bill Olsen paid for the move, which happened in August 1962.

With the car now under cover, it was time for a renovation. The first order of business was to install a new canvas roof. Rotting exterior wainscoting

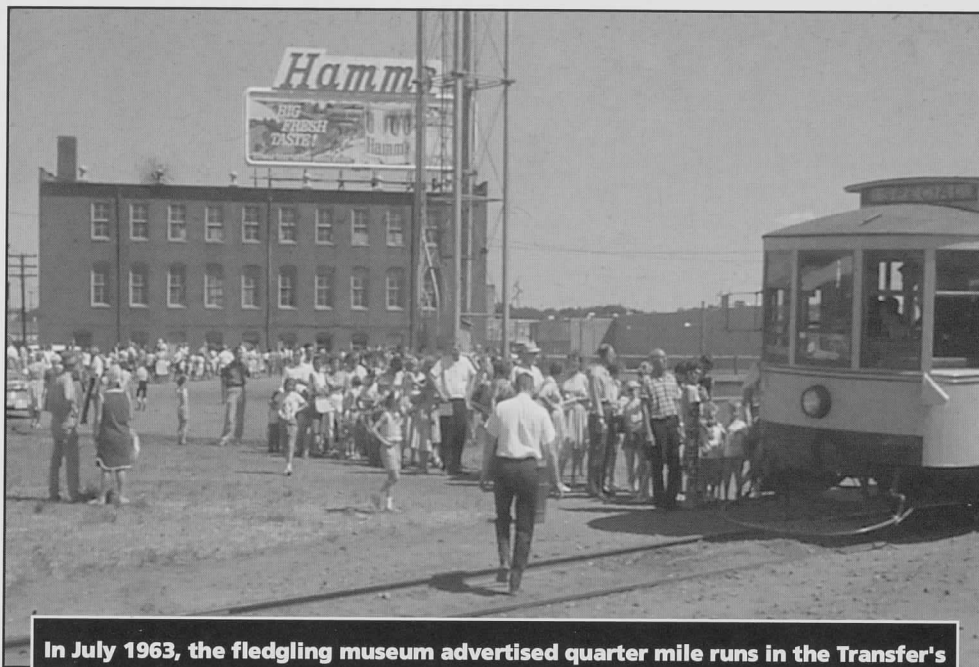
boards were replaced as needed. According to Frank Sandberg, the curved front-end exterior letter board was replaced, a tricky job that required steam-bending the wood. Rattan was ordered from the Phillipines and a number of seats were reupholstered. A new front step tread was installed. The car was cleaned inside and out and painted.

Jim Moe was the first president of MTM. An electrical engineer, he had built a portable generator for his company to test an experimental carburetor. He built it from a Duluth trolley bus traction motor that he found in a West Duluth scrap yard and rewired to act as a generator. He rebuilt a Dodge truck engine to power it. When the testing was complete, the rig became surplus, and he realized it could work as a power source for 1300.

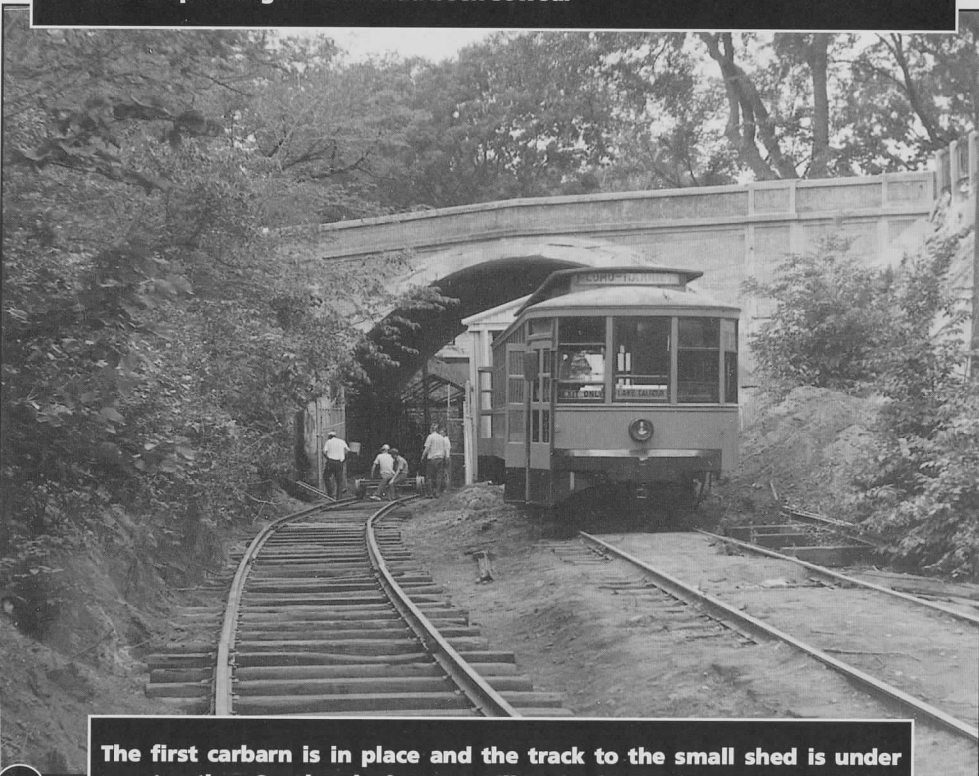
It was placed on a speeder flat borrowed from the Transfer and he and George Isaacs hooked up the generator to 1300's frame and trolley pole. When



Parked outside the Minnesota Transfer roundhouse, 1300 is in the midst of a reproofing. Wainscoting has been selectively replaced, but not yet repainted.



In July 1963, the fledgling museum advertised quarter mile runs in the Transfer's rail yard and this was the result. The public clearly missed the streetcars, and the seed of an operating museum had been sowed.



The first car barn is in place and the track to the small shed is under construction. Overhead wires are still in the future.

they turned the switch, Moe says that 1300's air compressor came on. They tested all the other electrical components and all worked. They opened the roundhouse doors and lo and behold, 1300 moved under its own power. That was May 11, 1963.

In July 1963 they received the Transfer's permission to take the car out into the "P" Yard, located north of University Avenue near today's Amtrak depot. They ran back and forth, and discovered it was capable of at least 45 miles per hour. Before the afternoon was over, people began walking up, asking if they could ride. According to Moe, about 100 appeared that first Sunday.

For three subsequent Sundays they ran in the yard. Moe says there was no notice to the public, but somehow the word spread and thousands of people turned out to ride. It was completely spontaneous. Apparently someone in railroad management heard about the Sunday operations and put a stop to them, but the overwhelming positive response had inspired the volunteers. Later in 1963, Barney Olsen drew up the papers and incorporated the Minnesota Transportation Museum. *Thanks to Jim Moe, Barney Olsen, Bill Olsen and Frank Sandberg for helping with this story.*

KEEPING 1300 HEALTHY

-John Prestholdt

We're lucky that the electric streetcar is a relatively simple, durable technology. If it wasn't, #1300 would be "stuffed and mounted" and inert, instead of the wonderful operating artifact that it is today. But what does it take to keep a 100-year-old machine in regular service?

When 1300 was operating for Twin City Rapid Transit, it accumulated perhaps 40,000 miles per year, or 200,000 miles between five-year rehabilitations, and 1.8 million miles over its 46-year service life.

In 2007 our little Como-Harriet line ran 4126 car miles and 2818 of those miles were run by 1300. We don't have an exact number, but it appears that 1300 has logged over 100,000 miles in museum service. That doesn't happen without some wear and tear.

Car #1300 was last rehabbed by TCRT on March 6, 1950. It ran for four more years, then sat outside in Hopkins for eight years. When MTM restored it at the Minnesota Transfer roundhouse, it received a new roof and selective replacement of the exterior wainscoting.

In 1975 the trucks were removed and shipped to the Soo Line's Shoreham Shops for rebuilding. In the process the car received new wheels, new axles, and new bearings. Frank Sandberg designed and manufactured four new large bull gears that fit on the axles and engage the motors. The old ones were too worn to save.

In 1979, the battery powered backup lights were added as a safety measure. Another safety feature was the installation of a low-air alarm.

In 1984 a new rear stepwell was fabricated to replace the original rusted-out one. The car received a new roof in 1992. The trucks were removed and reworked in 1993-94.

By 1999 it was clear that 1300 needed major work to continue operating. One clue was finding a large bolt on the track that had dropped off the car. Some floorboards were buckled upward, indicating structural problems underneath. The restoration of car 1239 had revealed structural deterioration requiring new steel and it seemed logical that 1300 would have some of the same problems.

Rewiring in 2003 was the first order of business. The old insulation had become brittle and would fall apart when touched. There was a clear danger of fire and it had to be replaced.

All the exterior woodwork window posts were redone in 2004-05, and deteriorated portions of the steel



underframe were repaired or replaced.

Over the winter of 2007-08, the shop crew removed the old exterior wainscoting and discovered and repaired the structural damage underneath.

1300 goes through certain wear items on a predictable timetable. The recent removal, cleaning and lubrication of the trolley pole base is a good example. Here is the list of yearly maintenance items:

- Inspect and/or replace brake shoes
- Lap (sand smooth) and lubricate brake valves
- Check and possibly replace trolley wheel and lubricate
- Replace broken/cracked glass and repaint windows
- Clean and lubricate controller
- Touch-up paint as needed

- Replace burned out light bulbs (vacuum filled only)
- Tighten screws
- Recover and repaint rattan seats as needed
- Strip and re-stain woodwork as needed

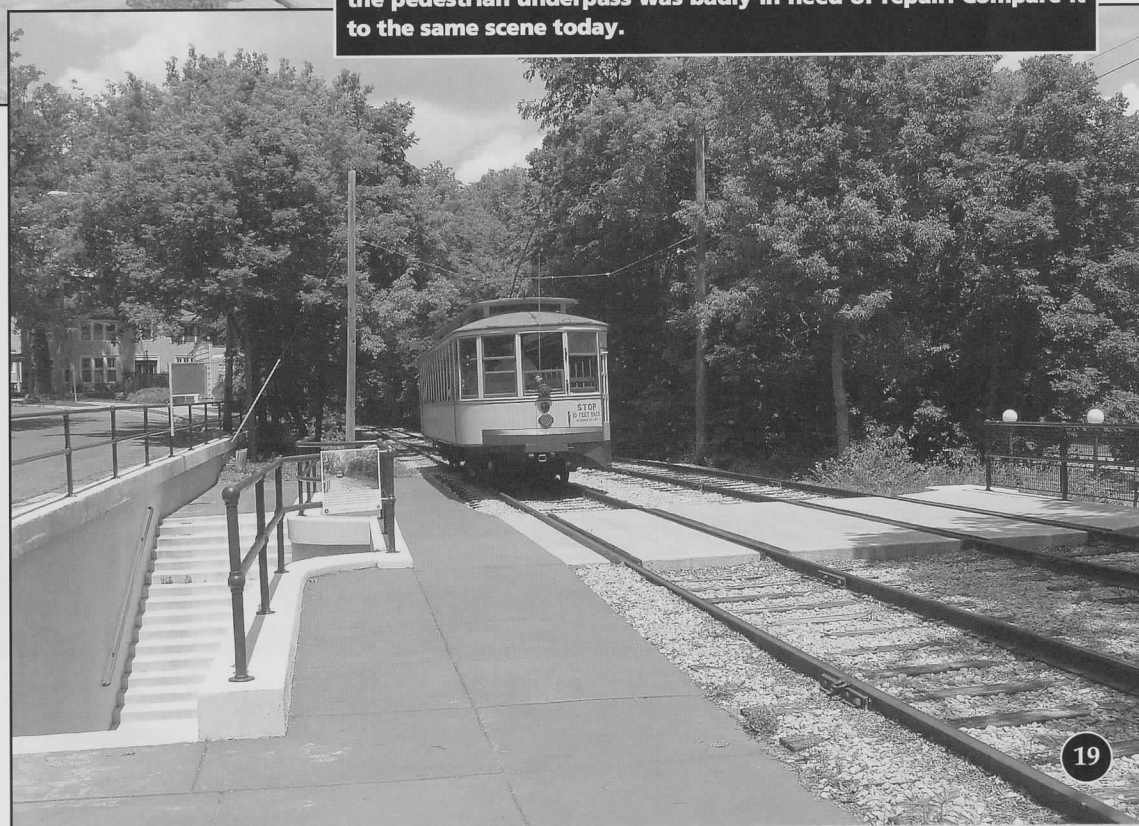
Lubricate all hinges, axles, and other locations

There are a few items that still await restoration. The original pull-down window curtains are not in good shape. The rear fare register has been jammed for years. The trolley pole retriever does not retrieve the pole as well as it should. These are small items, but ultimately need attention.



Time travel at the pedestrian underpass, seen above at the end of TCRT service in 1954.

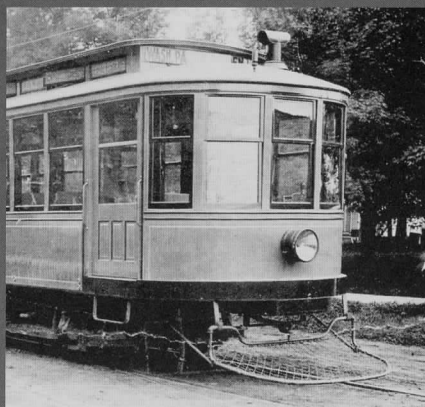
In 1971, there was no overhead wire, no ballast, no siding, and the pedestrian underpass was badly in need of repair. Compare it to the same scene today.



1908

TCRT

100 YEAR



Car 1300 was part of an order of 19 cars built in the Snelling Shops, St. Paul during March-May of 1908. As was the practice of the day, the car was configured for two-man operation with gates at the rear and only a motorman's door at the front.

Length 46' 7-1/8"
 Width..... 9' 2-1/2"
 Height..... 11' 5"
 Weight..... 47,800 lbs



1953 - Became one of the regular cars on the Inter Campus line.



1954 - All streetcar operations cease. 1300 is acquired by Minnesota Railfans Association and moved in a train to an unused railroad siding in Hopkins.

1928 - Rebuilt with front-exit doors and assigned to East Side Station.

In 1921, 1300 was transferred to the Duluth Avenue Station where it was equipped with front marker brackets for "St. Paul Wildwood" service on the Stillwater Division.



1931 - Rebuilt for one/two-man operation and assigned to Lake Street Station.

1934 - Re-assigned to East Side Station.

23' 4"

1908

1921

1928

1931

1934

1953

1954

2008

1300

OF SERVICE



1963 - After some restoration and a new paint job, 1300 is operated in Midway Yard. Ten thousand people showed up over several days. The waiting line was a city block long at times. The potential for an operating museum is apparent.

1962 - Minnesota Transportation Museum is formed. Car 1300 is once again moved, this time on a lowboy semi truck, to the Minnesota Transfer Railway's Midway Roundhouse.



1971 - Car 1300 makes its final move to the restored Como-Harriet right-of-way at Lake Harriet. A carbarn is erected and restoration begins.



Now in its 37th year, and operated by the Minnesota Streetcar Museum, 1300 has become a perennial favorite with the public.

Trips.....	35160
Rides	889500
Charters.....	1475

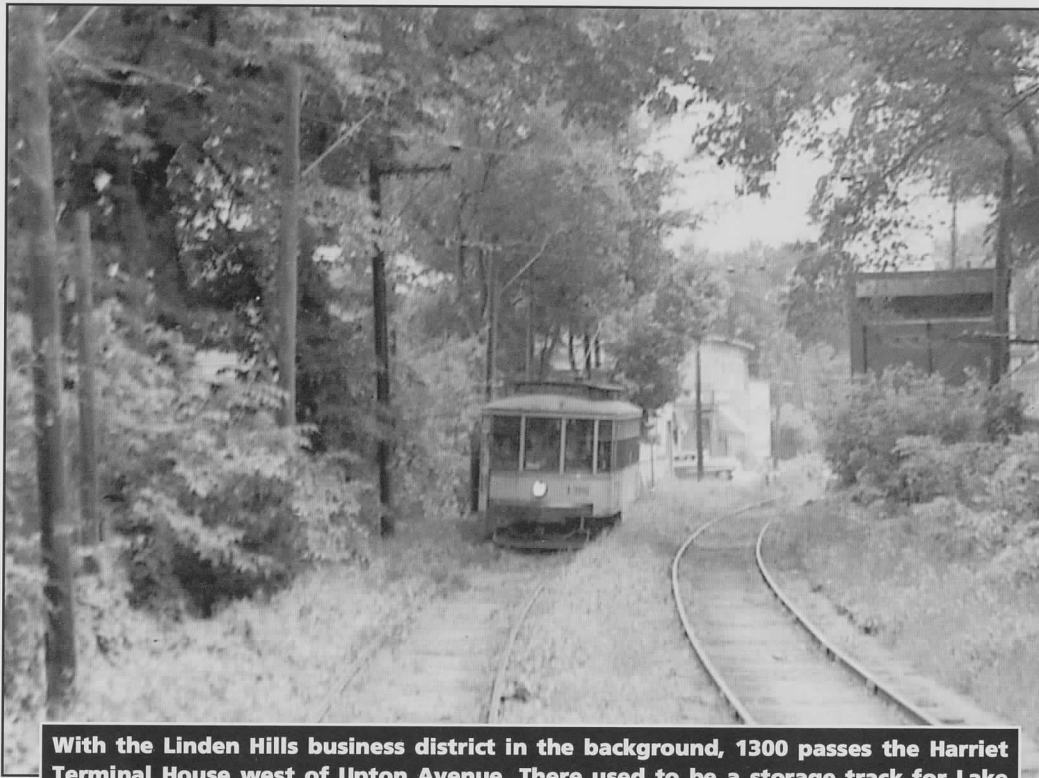
1962

1963

1971

2008

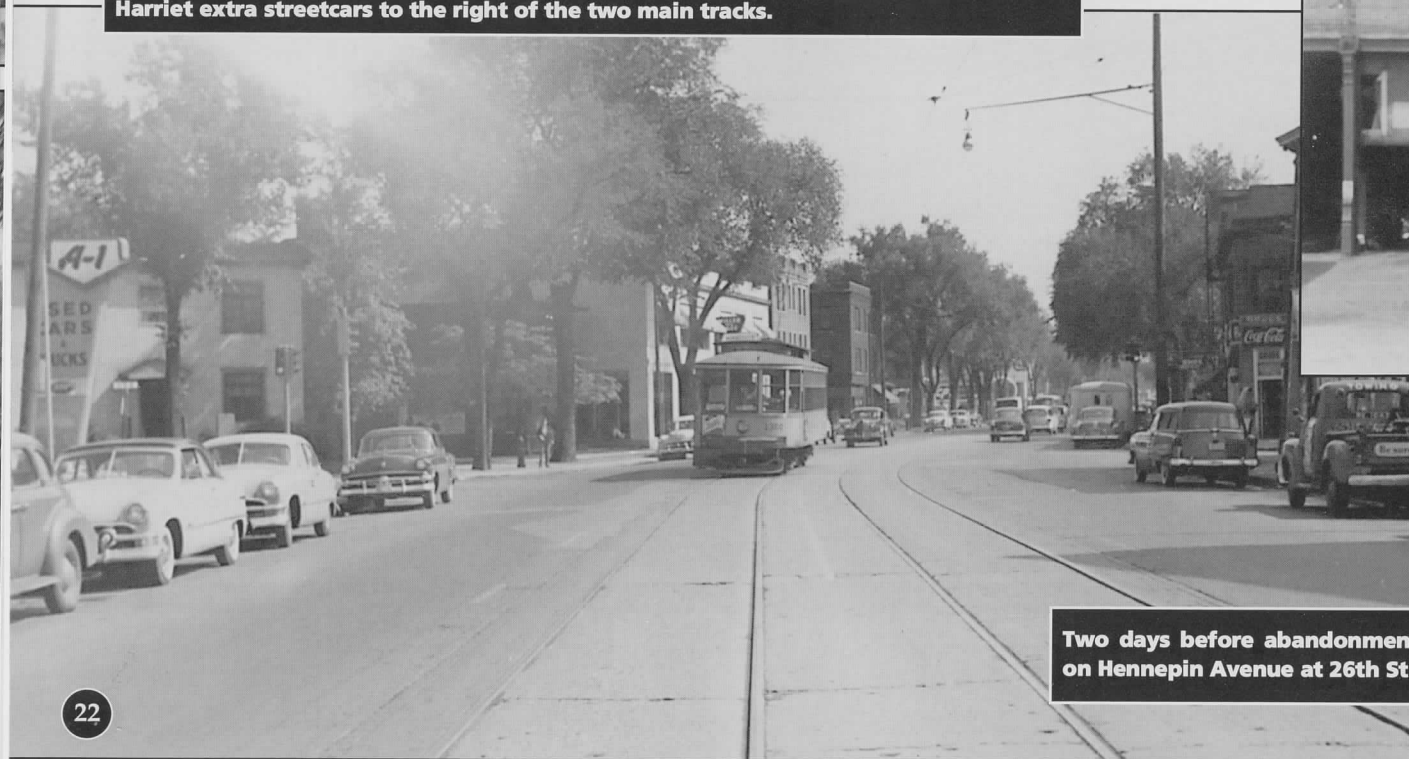
Timeline by Ron Middlestaedt



With the Linden Hills business district in the background, 1300 passes the Harriet Terminal House west of Upton Avenue. There used to be a storage track for Lake Harriet extra streetcars to the right of the two main tracks.



On March 4, 1953, the St. Paul portion of the Como-Harriet was still in service and 1300 is westbound on Como Avenue at Eustis. Art Rusterholz photo.



Two days before abandonment, Ed Nelson captured 1300 southbound on Hennepin Avenue at 26th Street. Edwin Nelson photo.

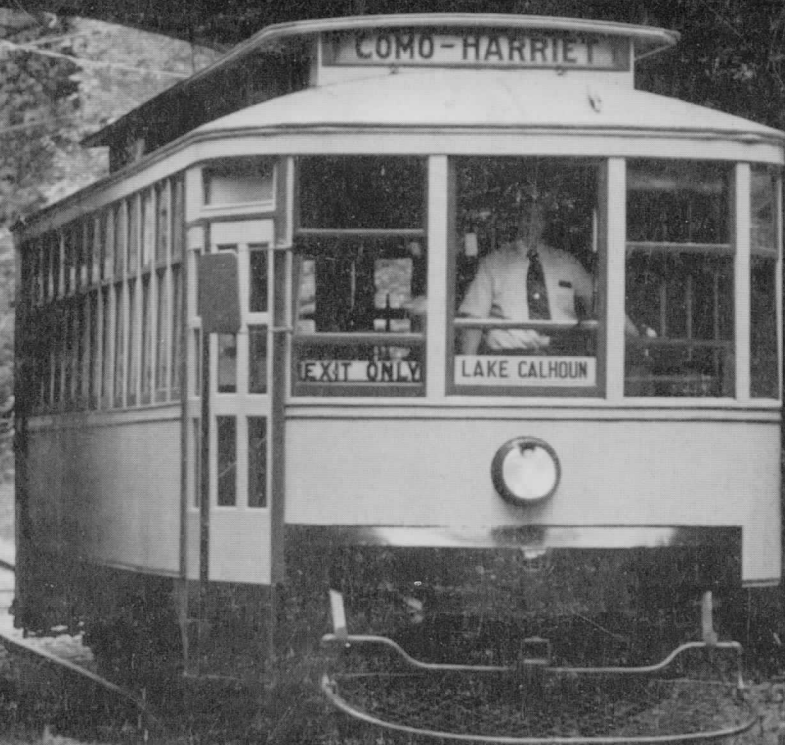


Norman Kansal and Ralph Pierce pose in front of 1300 at East Side Station on June 13, 1954. Edwin Nelson photo.



Inside rear cover: On June 9, 1971, 17 years after it last ran here, 1300 arrives at Lake Harriet, to start a new life on the reborn Como-Harriet Line.
Rear cover: The cover of the 1981 Minneapolis phone book cemented 1300's status as a Minneapolis icon. The same photo was soon adopted as the logo of the Linden Hills neighborhood.

A streetcar saved by desire" ... see inside back cover



Minneapolis

and surrounding communities

1981 White Pages

Area Code 612

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